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HIKO BELL MINING & OIL COMPANY, INC.

P.O. DRAWER AB
VERNAL, UTAH 84078

May 24, 1979

State of Utah
Department of Natural Resources
Division of Oil, Gas, and Mining
1588 West North Temple
Salt Lake City, Utah 84116

Attention: Mr. K. Michael Thompson
Engineering Geologist

Dear Mr. Thompson:

As requested by your letter of March 16, 1979 in which the Division of Oil, Gas, and Mining requests that the three gilsonite mines in the Little Bonanza area being mined by Ziegler Chemical & Mineral Corp. be combined into just one mining plan, we are sending the revised plan attached to this letter.

Robert E. Covington

Robert E. Covington, Consultant

cc:Ziegler Chem
Frank Godina

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1. Location of Mining Operation:

Ziegler Chemical & Mineral Corp., P.O.Box 455, Great Neck, New York, has three underground mining operations for gilsonite in the Little Bonanza Mining area, Uintah County, Utah. They are described as follows:

Township 9 South - Range 24 East, S.L.M.

Vein Sys	Mine Name	Location	Elevation	Lease No. or Patent
Little Emma	Little Emma E-5	Sec.32 ($NE\frac{1}{4}NW\frac{1}{4}$)	5480 grd	Patented
Independent	I-4	Sec.16 ($NW\frac{1}{4}NE\frac{1}{4}$)(part)	5360	State of Utah Gilsonite Lease ML-851-A & Patented Lands
Little Bonanza	8-A	Sec.15 $SW\frac{1}{4}SW\frac{1}{4}$	5380	State of Utah Gilsonite Lease ML-20776

The owners of record of surface and minerals under the State of Utah Gilsonite Lease ML-851-A and State of Utah Gilsonite Lease ML-20776 is the State of Utah. The leasee of oil and gas rights on ML-851-A is Chorney Oil and Pacific Gas Transmission (ML-28095) and the same leasees for ML-20776. The leasee of oil shale mining rights under ML-851-A is Western Oil Shale (ML-24156). The same oil shale leasee has mining rights under ML-20776.

Ziegler Chemical & Mineral Corp. is the prior leasee and has established mining rights and is in fact and has been mining under these leases prior to the issuance of other leases presently held by the above leasees and is not therefore required to notify said leasees since they have been advised by the State of Utah that Ziegler has mining leases for gilsonite.

II. Description of Present Mining Operations

Ziegler Chemical & Mineral Corporation is, at present and has been, for the past 10 years or more, underground mining in the Little Bonanza area for gilsonite.

Workable gilsonite persists in this area to the top of the Green River Formation, estimated to be at depth of 850-900'.

The mining method employed is a modified open stope method. Each of the presently operated mines is using one shaft per mine. The shafts are of the 3 compartment type and have been sunk on the respective veins. Mining utilizes a 75 horsepower airlift and chipping hammers, using conventional hoist and tipple. Mining methods do not embrace opening to the surface, so sufficient cap rock is left in place to prevent surface caving. All shafts will be sealed at termination of mining activities.

Presently existing roads handle all traffic to and from the mines. The mining area can be reached by turning west from Utah Highway 45 at the Little Bonanza-Ziegler sign and travelling by paved road to the Little Bonanza mining camp of Ziegler. The mining camp and offices are located on patented lands in section 16, T. 9 S., R. 24 E. The haulage roads from the 8-A Mine and the E-5 mine have been in existence for 50 years and are maintained by Ziegler. Access to the I-4 Mine is by dirt road 2000' from the office in a northwesterly direction. Access to the E-5 Mine on the Little Emma gilsonite vein is by dirt road from the office 8000' in a southwest direction to the well travelled Bonanza to Ouray road, then 2 miles south and then east for 2000'. Access to the 8-A Mine on the Little Bonanza vein is by existing dirt road from the office south for $\frac{1}{2}$ mile and southeast for $\frac{1}{4}$ mile.

The mining operation consists of two 3man crews at each mine (2 men underground, 1 on the surface hoist) working in three shifts. Production from the 3 mines is 100 tons of gilsonite daily. From Little Bonanza the gilsonite is hauled in sacks or closed containers to Craig, Colorado and points east. Some ore is stockpiled between the office and the sacking plant which is 1000' southeast of the 8-A Mine.

Equipment at the I-4 Mine consists of a skid-mounted hoist house, a front end loader, an air compressor, a hoist, an airlift, a generator and a truck. Road maintainance equipment and repair shops and a change house are part of the company headquarters buildings.

Equipment at the 8-A Mine consists of a skid-mounted hoist house, a front end loader, an air compressor, a hoist,

a generator and a truck. At the E-5 Mine equipment consists of a skid-mounted hoist house, a front end loader, an air compressor, a hoist, an airlift, a generator and a truck.

All mining activities are conducted in a safe and orderly manner. Topsoil to be used for reclamation purposes will be hauled in and stockpiled for future use.

After operations have ceased, all buildings, machinery, and debris will be removed or buried and all shafts and mine vents will be sealed with reinforced concrete to prevent unauthorized entry. All gilsonite will be removed from the surface and the area will be graded to conform to the local topography. To the extent possible, the stockpiled soil will be spread over the affected area and the entire area will be scarified, fertilized, and seeded with a grass-shrub mixture recommended by the Division of Oil, Gas, and Mining for the State of Utah. Reclamation will begin as each section of the disturbed area is no longer used for production.

R E C L A M A T I O N P L A N

ZIEGLER CHEMICAL & MINERAL CORP.

for

I-4 Mine (Independent)

E-5 Mine (Little Emma)

8-A Mine (Little Bonanza)

Uintah County, Utah

MINING APPLICATION NO. _____

Date _____

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
1588 West North Temple
Salt Lake City, Utah 84116

MINING AND RECLAMATION PLAN

(Other forms may be used in lieu of MR 2, provided they contain the same information)

1. Name of Applicant or Company Ziegler Chemical & Mineral Corp.

2. Proposed type of operation Underground Mining - 3 mines= Little Emma (sec.32 ($NE\frac{1}{4}NW\frac{1}{4}$-patented land))

3. (a) Prior Land Use(s) None I-4 (sec.16 $SW\frac{1}{4}NE\frac{1}{4}$) patented & ML-851A State of Utah Gilsonite Lease) and

   (b) Current Land Use(s) None 8-A (sec.15 $SW\frac{1}{4}SW\frac{1}{4}SW\frac{1}{4}$) State of Utah gilsonite lease ML-20776, all in T9S,

   (c) Possible or Prospective Future Land Use(s) None R24E, Uintah Co. Utah

4. What vegetation exists on the land proposed to be affected Sagebrush

   (a) Types and Estimated Percent cover or density: _____

5. What is the range pH of soil before mining? _____ pH

   Name of Person or Agency and method of determining pH _____

6. Site elevation above sea level 8-A=5380; I-4=5360', E-5=5480'

7. In case of coal, oil shale, and bituminous sandstone:

   Principal seam(s) and thickness(es) _____

8. Estimated duration of mining operations 10 years

9. Has overburden, waste or rejected materials been classified as acid or alkali producing? (x) Yes ( ) No
   Does the above material being moved have any other characteristics affecting revegetation? No

10. Will any underground workings or aquifers be encountered? ( ) Yes (x) No
    Describe _____

    Is there an active discharge of water from abandoned deep mines on or crossing the land affected? ( ) Yes (x) No If yes, describe the quality of water being discharged. _____

See following pages for items below.

11. Describe specifically a detailed procedure for:

(a) The mining sequence
(b) The procedure for constructing and maintaining access roads, to include a typical cross-section and a profile of the proposed road grades.
(c) The procedure for site preparation including removing trees and brush.
(d) The method for removing and stockpiling topsoil or disturbed materials.
(e) The method for the placement or containment of all disturbed materials, to include the method for handling of all acid or alkali-producing and toxic material.
(f) A procedure for final stabilization of disturbed materials.

GRADING AND REGRADING

Specifically describe:

(a) Typical cross-section of regrading.
(b) The method of spreading topsoil or upper horizon material on the regraded area and indicate the approximate thickness of the final surfacing material.
(c) What type of soil treatment will be utilized.
(d) The method of drainage control for the final regraded area.
(e) Maximum grading slope.

TESTING

1. Describe method for testing stability of reclamation fill material.

_____

Describe method for the testing of soil that is intended to support vegetation

_____

2. Describe any soil treatment employed as an aid to revegetation _____

_____

3. Describe surface preparation of areas intended to support vegetation:

_____

_____

_____

_____

REVEGETATION

1. Revegetation to be completed by:

( ) Operator
( ) Soil Conservation District
( ) Private Contractor
Name _____
( ) Other (specify) _____

( ) Hydroseeding
( ) Aerial Seeding
( ) Conventional or Rangeland Drilling
( ) Other (specify) _____

2. Will Mulch be used?
Type _____ Rate/Acre _____ lbs.

11. (a) See attached Mining Plan

(b) Does not apply.

(c) Does not apply.

(d) Does not apply.

(e) All disturbed topsoil will be replaced after mining operations are completed by replacement onto disturbed site. Topsoil will be machine packed. There are no acid or alkali-producing and toxic materials produced in the mining operation.

(f) Final stabilization of disturbed materials will be made by regrading and reseeding. (see below)

GRADING AND REGRADING

(a) Does not apply.

(b) Spreading Soil. A bulldozer will be used to spread the stockpiled topsoil. The approximate thickness of the topsoil will be 1.0'. The original contours will be restored as nearly as possible.

(c) Soil Treatment. Prior to the regrading of the topsoil, tests will be ran on the topsoil by the Utah State University testing station to determine pH, fertility rate, etc. Plans are to use U.S.U.'s recommendations for soil treatment.

(d) Drainage Control. Natural drainage will be re-established by hand ditching or dozing.

(e) Maximum Grading Slope. The maximum grading slope will be 2% or less.

T E S T I N G

1. Reclamation fill materials testing is not a requirement in this mining operation. The testing of soil to support vegetation will be done by Utah State University.

2. Utah State University will do the testing for soil treatment as an aid to revegetation.

3. Affected area will be regraded and mulched. Seed bed preparation will consist of utilizing U.S.U.'s recommendations. The Division of Oil, Gas, and Mining recommends the following seed mix to provide a self-sustaining balanced community capable of plant succession:

GRASSES	
Crested Wheatgrass	4 pounds/acre
Russian Wildrye	2 pounds/acre
~~Sweet~~ Bluebunch Wheatgrass	2 pounds/acre
FORBS	
Alfalfa	2 pounds/acre
Sweet? Yellow Wheatclover	2 pounds/acre
SHRUBS	
Antelope Bitterbrush	2 pounds/acre
Utah Serviceberry	2 pounds/acre

R E V E G E T A T I O N

1. Revegetation to completed by the operator using conventional seeding.
2. Mulch will be used if deemed necessary by the State.

3. Revegetation Plan and Schedule - Will be based on Utah State University Soil Testing Laboratory recommendations.

Species	Rate/ Acre	Planting Location	Facing N-S-E-W	Season to be replanted
	See above note			

4. Will affected area be subject to livestock or wildlife grazing? ( )Yes (x) No Will vegetation protection be needed? No

5. Will irrigation be used? ( ) Yes (x) No Type _____

6. Describe maintenance procedures for revegetation if needed, until surety release is granted. Monthly field inspections

I, the undersigned Operator, hereby submit this to be my Reclamation and Mining Plan for the area shown on the attached map. I further understand that the operation will be conducted in accordance with the Mined Land Reclamation Act of 1975, and all rules and regulations currently in effect thereunder.

Signed G.S. Ziegler Jr. Operator Date 5/29/79

Ziegler Chemical & Mineral Corp. [redacted] G.S. ZIEGLER, JR

Taken, subscribed and sworn to before me the undersigned authority in my said county, this 29TH day of MAY, 1979.

Notary Public Brian Lynch

My Commission Expires: 3/30/81

BRIAN LYNCH
NOTARY PUBLIC, State of New York
No. 30-4613944
Qualified in Nassau County
Commission Expires March 30, 1981